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(Assignment 2 -   20%)

Assessment 2: Requirements Document

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Declaration

I herby certify that this material, which I now submit for assessment on the programme of study leading to the award of Ordinary Degree in Computing in the Institute of Technology Blanchardstown, is entirely my own work except where otherwise stated.

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GymGo

Client

The client for this website is a gym looking to expand their business to become an online business. They will require the website to allow gym members to make an account to interact with the gym, buy products and book lessons, and for the website to process and save these interactions and update the gym about them.

1. Project Overview

The GymGo project is mainly aimed at creating a custom website to simplify and enhance gym management. The software will provide a comprehensive system for gyms which will allow users to buy memberships, book lessons and purchase items from the online store. The main components of the software are user profiles, lesson booking, and an online store. These components enable gym owners to have a profile system for their members and the website will allow the members to book lessons and buy gym products effortlessly. GymGo will be used by gym owners and members, the owners will use the software to handle memberships, schedule lessons, and manage the online store and members will use the GymGo software to easily book lessons and purchase items from the gym's online shop. GymGo's main aim is to simplify tasks for owners and members using the software.

2. Document Revision

Rev. 1.0 10/02/2024 – initial version

Rev. 2.0 13/02/2024 - points expanded

Rev. 3.0 16/02/2024 - Use case included

Rev. 4.0 17/02/2024 - Final revision

3. Scope

3.1 Main components

The Profile functionality acts as the user's personalized hub within your software. It's essential to offer core features like user registration, login, and logout, along with the ability to manage personal information such as name, email, and contact details. These are required components for user identification.

Booking lessons is easy by finding your perfect lesson is a with our 3-click process. Just choose your day, browse available times, and click to secure your spot.

Browse through a selection of gym essentials, to enhance your workouts. Simply click on what catches your eye, then pay! A clear and concise summary awaits, showing you, exactly how much will cost.

3.2 What's out?

Having a Progress Tracker would have been a benefit for the customers, as they could have seen how they are doing, what needs to be improved in their diet or exercises they perform.

Loyalty Points were based on each customer performance based on the going to lessons and each purchase they would've done.

4. Walkthrough Scenarios

4.1 User

Interacting with the Software: Gym members will use GymGo to create a profile, book lessons and make purchases from the online store.

Members will have the option to create their profile by providing necessary personal information such as name, contact details and fitness preferences. Members can also easily navigate to the lesson booking section where they can easily book a lesson and can view any additional information about the booking/s. Additionally members can explore the online store section to browse and purchase products and gym essentials, the products can be viewed in depth individually, items can be bought or added to cart.

4.2 Administrator

The gym owner will also have the option to log in as an administrator where they will be able to make changes to the website.

Once logged in an administrator will be able to edit the details of lessons and products or add/remove products from the website. They will also be able to add or remove images from the gallery of the home page.

5. Software Requirements Analysis:

5.1 User Requirements
The main components of the GymGo software system includes a wide range of features. These are a members/sign-up functionality, designed to manage member details. Additionally, the system will allow users to book lessons, with databases for lessons and booking pages, allowing users to select preferred dates, days, and times. Finally, an online store is incorporated, featuring databases for products and payments, as well as pages for browsing and purchasing gym-related products and subscriptions.
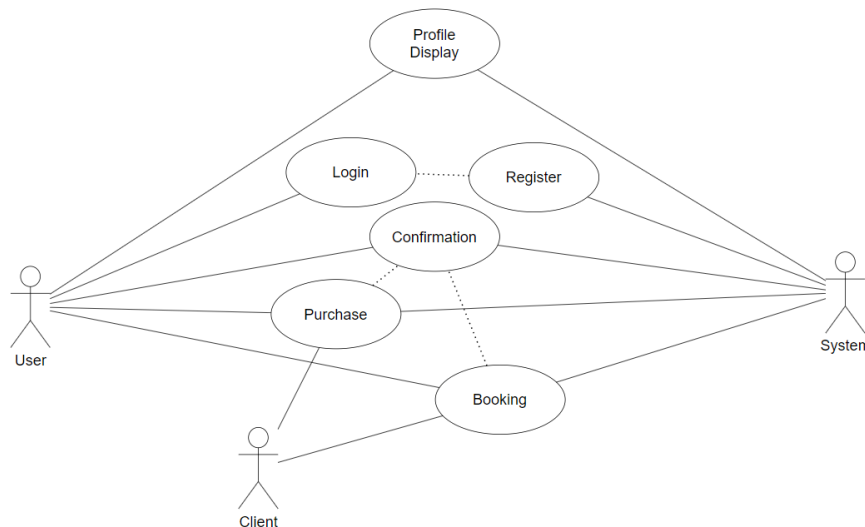
5.2 System Requirements
5.2.1 Use Case Specification

Table 1 Use Case Specification / Scenarios

Book Lesson:	• Users will select a day they want to book a lesson. • System makes a request to search for all available lessons that day. • The database returns the lessons of that day. • The list of lessons is displayed to the user. • The user selects to book the lesson they want. • The system checks if they are logged in and instructs them to if they are not (See login/logout). • The system makes a request to see if the user has booked any other lessons at this time. • The database returns a lesson at that time or nothing. • If the user has a lesson booked at this time they are warned and provided the option to cancel or continue. • If the user continues, the system sends a message to the database to update who is attending the lesson. • The system displays a confirmation message to the user and gives them the option to return to the home page or continue in the booking page. • The user is directed to whichever page they select.
Register:	• Users must put their name, surname, age, address, phone number, email address and to create a unique password. • The user than clicks the submit button. • System sends all the registration details to the database. • Database return the Login successful details to the system. • The database saves all the user registration details so the next time they login is by using their email and created password. • System confirms user with a message - successful registration.

Login/Logout:	• Administrator must login to the system using his username and password.
	• Authentication request sent to the database to confirm administrator`s details.
	• Authentication verified.
	• Workspace displayed to the administrator.
Buying:	• The user selects the Online Store section.
	• They are presented with many products and essentials available for purchase.
	• The system makes a request to see all the items for sale.
	• The database returns the items for sale.
	• The system displays the items for sale.
	• The user then can select a specific product.
	• After selection, the system makes a request to see detailed information about the specific product.
	• The database returns the information such as details including price, description, available variants for sale.
	• The system displays the information of the item that is for sale.
	• If the Gym Member decides to purchase the product, they can proceed directly to checkout pressing the Buy button.
	• The system prompts the Gym Member to confirm the purchase.
	• If the Gym Member is logged in, the system makes a request to the database to see inventory levels. Then the database processes the request.
	• If the Gym Member is not logged in, they are forced to fill out the shipping details page.
	• After completing the shipping details, the system makes a request to the database to store the provided information.
	• Then the system makes a request to the database to see inventory levels. Then the database processes the request.
	• Once the purchase is confirmed, the system generates a transaction record and stores it in the database.
	• The Gym Member receives a confirmation message indicating successful purchase along with an order summary.
	• The inventory levels of the item in the database are updated.

Cancelling Bookings	• The user selects the booked section of the lessons page. • The system checks if they are logged in and instructs them to if they are not (See login/logout). • The system makes a request to see all the lessons booked buy that user. • The database returns the booked lessons of the user. • The system displays the lessons booked by the user. • The user then selects to cancel the booking. • The system sends a warning to the user and asks if they want to continue. • If the user continues, a message is sent to the database to delete that lesson booking. • The system informs the user that their booking has been cancelled. • The system displays the booked lessons of the user, without the deleted booking.

5.2.2 Use Case Diagram


5.3 Non-functional Requirements:

Feedback: Provide clear feedback to users on their actions (e.g., confirmation messages, loading indicators). Implement user feedback mechanisms (e.g., surveys, feedback forms) to improve the system over time.

Buttons to correct mistakes and navigate: Will let the user return to their previous page or continue to recommended pages without having to use the navigation bar or back buttons or cancel unwanted actions simply without having to contact the gym directly.

6. Graphical User Interface Design

The look and feel of the website will be large part of the website design, as similar websites on the market also largely focus on design, often more than function. The website won't be text heavy or too technical to ensure it is easily understandable to users. The team will also focus on making the website easily usable, using as few clicks as possible to navigate, make booking decisions and buy products. Buttons will also be implemented to make it simple to correct mistakes. The team will also focus on ensuring the website will provide meaningful feedback to the users, such as displaying upcoming bookings, regularly booked lessons and popular products. The layout of the website will be consistent throughout pages, keeping the pages for booking lessons and buying products similar to ensure the layout and functionality of the website is easy to learn for new users.

All pages will have the same header and footer, as show below.
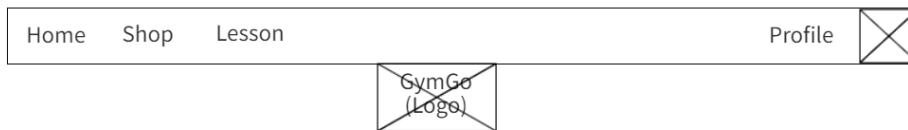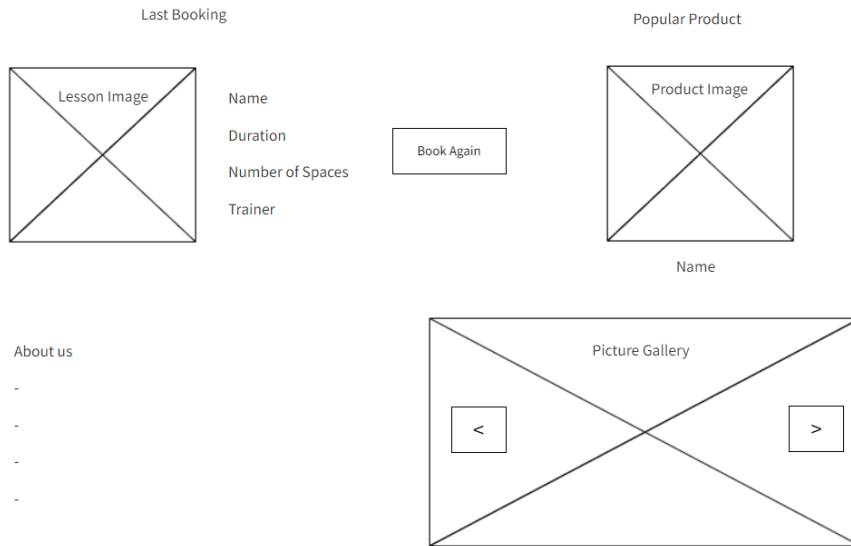

The header mainly consists of a nav bar and the website logo.

The footer contains the social media links of the client.

The main page of the website shows the last lesson booked and the most popular product on the website, a section describing the gym and a gallery of the gym itself.

Last Booking

Lesson Image

Name

Duration

Book Again

Number of Spaces

Trainer

Popular Product

Product Image

Name

About us
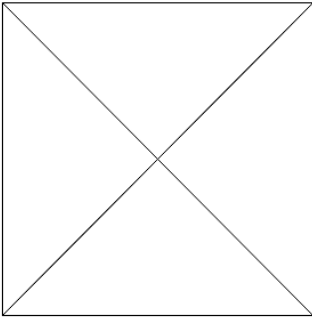
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Picture Gallery

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>

The main products page contains images with a of products with clickable names.

One the user clicks the title/image it will redirect the user to a different page with a more in-depth description of the product.

Name

Name
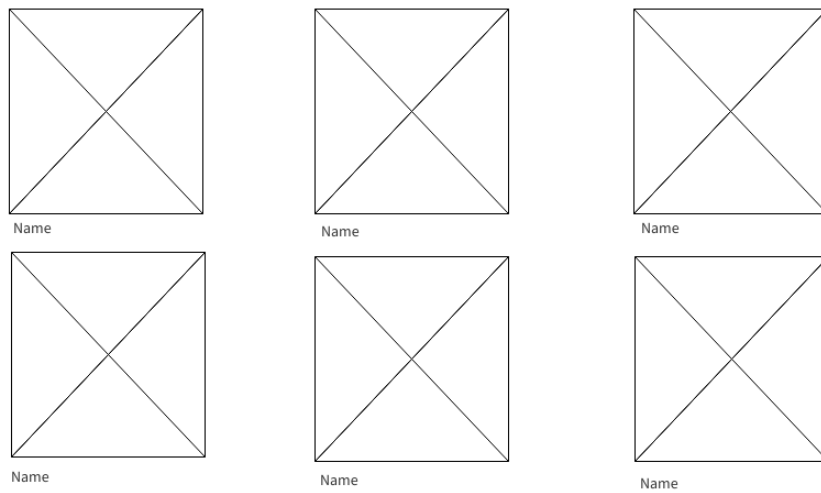
Name

Name

Name

Name

This is the more in-depth product description page. On this page, the user will be able to choose the specifications of the product, such as size or colour before buying.

Name

Price

Small description

Size

Color

Add to cart

Description

Before buying a product if the user is not logged in, they will have to fill in shipping details before ordering.

Name

Address

Mobile-Numer

Email

Terms and Conditions

Submit

The lessons page will contain 2 subpages, showing lessons booked and lessons available.

The booked page will also have buttons to easily allow the user to cancel bookings.

Booked

Avalible

Lesson image

Name

Start time

Start date

Time till start

Cancel

Lesson Image

Name

Start time

Start date

Time till start

Cancel

The available page will allow the user to select the day they want to book and allow the users to book any lesson on that day.

Booked

Avalible

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |

Lesson image

Name

Duration

Number of spaces

Trainer

Time

Book

Lesson image

Name

Duration

Number of spaces

Trainer

Time

Book

Lesson image

Name

Duration
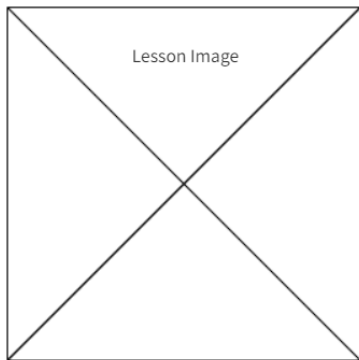
Number of spaces

Trainer

Time

Book

Lesson image

Name

Duration

Number of spaces

Trainer

Time

Book

From the available page the user can click the lesson image to see a more in-depth description of the lesson.

Lesson Image

Name   Description

Duration   -

Number of Spaces   -

Trainer   -

Book   Go Back

They will also have the option to go to a profile page, where they can log in if they aren't already.

Welcome to GymGo

Email

Password

If they are new to the website, they can also register.

Login 👤

*************** Online Registration Form ************

| Name | Surname | Date of Birth |

| Address (Eircode) | Phone Number | Email address |

Password

✓ Submit

Once in the profile, they can view their user details.

👤 Bob Smith

Edit Profile

Name:

Surname:

Date of Birth:

Address - Eircode:

Phone Number:

Save

7. Technical Requirements and Feasibility:

While developing the website, the team will all need to follow one project management approach to ensure that the team works as efficiently as possible throughout the project and that all team members working with the same approach in mind. For the teams' purposes, an agile methodology will be most efficient as it will easily accommodate for any possible changes or mishaps during the project. It will also ensure that all team members have clear short-term goals to produce the website and that all team members are contributing equally throughout the website's development.

The website will require different levels of access depending on the user. Firstly, for general purposes uses, such as the main components (described in scope), login etc of the website available to all users. Some users, such as the client or employees of the client will require more access, such as purchase and booking information of all users and modifying the website, such as changing images and descriptions of lessons and products or adding new ones. To achieve this goal the team will create the website with a user hierarchy consisting of a general user with restrictions to some information and pages, and an admin user with full access to the whole website and the ability to modify the website. The admin user and general user will have a mostly similar view of the website, with the admin having extra buttons to edit existing components as needed and to add/delete components but will not be able to buy products, book lessons or see any user info from this view.

In the process of developing the website, the team has decided to use a combination of a standard markup language, a scripting language and a persistence storage system to meet their requirements. The team has also decided to use open-source platforms for these components to negate costs for creating the project.

The team has decided to use HTML as their markup language as it is the standard markup language used in websites and this will meet the basic structure and navigational requirements of the page. CSS will also be used to create the desired look for the page.

A more advanced scripting language will be needed to meet the functional requirements of the website, such as dealing will data form the website, using data dynamically and giving the site a more interactive experience. PHP will be used as the scripting language as it especially suited for use in websites and should meet all of the required functionality.

Finally, the data needed to run the website, such as lessons, user info and booking details will need to be stored in a persistence storage system. For the teams purposes it doesn't need to accommodate for particularly large amounts of data and should be able to interact with the webpage. The team has chosen to use MySQL for this as it will meet the mentioned requirements and an opensource database tool.

8. Conclusion

The main aim of the project is to make a website for gyms which allows users to more easily interact with the gym. The main functions of the website are allowing users to easily book lessons and buy products after making an account on the website, which will also allow the client to advertise their business and keep track of popular lessons and products. The website will be made with user friendliness in mind, focusing on ensuring the user must do minimal work to interact with the website, having a consistent design to ensure use of the website is easy to learn and to providing usable feedback to the user while using the website.

The team will employ an agile project management approach to create the website, having separate general user and client (admin) functionalities. The website will be made using a combination of a standard markup language, scripting language and persistent storage system.